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TITLE: FERROELECTRIC CAPACITOR STRUCTURE
AND ITS MANUFACTURE

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ABSTRACT:

PROBLEM TO BE SOLVED: To prevent generation of deterioration due to annealing in a hydrogen gas atmosphere, by making an upper electrode layer in a lamination structure of an electrode layer and a conductive protective layer composed of oxide conductive material.

SOLUTION: An upper electrode 8 has the lamination structure of an electrode layer 82 and a protective layer 81. The protective layer 81 is a layer

protecting an inner ferroelectric layer 6 from reduction which is to be caused by hydrogen gas passing the electrode layer 82 at the time of heating in a hydrogen gas atmosphere, and composed of oxide conductive material. This material has conductivity, can constitute the electrode 8 of lamination structure when the lamination structure with the electrode layer 82 is formed, is oxide easy for reduction, and can protect the inner ferroelectric layer 6 from reduction by hydrogen gas because the material itself is reduced by the hydrogen gas. When the protective layer 81 is reduced, it acts as an electrode because it is changed to metal having conductivity. Thereby the protective layer 81 effectively functions as a protective electrode layer of the inner ferroelectric layer 6.

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